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WHAT IS CLAIMED IS:

1. A method for identifying an organic molecule ligand that binds to a site of interest on a biological target molecule, said method comprising:
 - 5 (a) obtaining a biological target molecule that comprises or has been modified to comprise a chemically reactive group, wherein said site of interest on said target molecule comprises said chemically reactive group;
 - (b) combining said target molecule with one or more members of
10 a library of organic compounds that are capable of covalently bonding to said chemically reactive group, wherein at least one member of said library binds to said site of interest and forms a covalent bond with said chemically reactive group to form a target molecule/organic compound conjugate; and
 - 15 (c) identifying the organic compound that forms a covalent bond with said chemically reactive group.
2. The method according to Claim 1, wherein said biological target molecule is selected from the group consisting of a polypeptide, a nucleic acid, a carbohydrate, a nucleoprotein, a glycopeptide, a glycolipid
20 and a lipoprotein.
3. The method according to Claim 2, wherein said biological target molecule is a polypeptide.
4. The method according to Claim 3, wherein said polypeptide is selected from the group consisting of an enzyme, a hormone, a
25 transcription factor, a receptor, a ligand for a receptor, a growth factor and an immunoglobulin.

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